



1000 River Street
Essex Junction, VT 05452

65
VT
TU

March 20, 2012

EPA Region 1
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100, Mail code: OES04-2
Boston MA 02109-3912

Subject: Initial Area Source boiler tune-up for

IBM Corporation

1000 River Street, Mail Stop 966B

Essex Junction, VT 05452



To whom it may concern:

Enclosed please find the report for IBM's initial tune up of its Area Source boilers. This facility complies with the requirements in section 63.11214 to conduct an initial tune-up of its boilers. By signing this document I certify the truth, accuracy, and completeness of this submission.

If you have any questions about this report please contact David Kost (dlkost@us.ibm.com, 769-2761), or Michelle Bolz (mmbolz@us.ibm.com, 802-769-4672)

Sincerely,

Tim Baechle 3/20/12

Tim Baechle
Manager of Energy, Environmental and Chemical Programs
tbaechle@us.ibm.com
1-802-769-4153

- cc: E. Berliner
R. Frieberg
M. Bolz
D. Fersing
D. Kost
M. Pelletier
C. Callahan
Doug Elliot (VT APCD)

SECTION II: RECORD OF GENERAL BOILER INFORMATION

Date: 3/20/2012

Reporting Period: 3/1/2011 → 2/28/2012

Boiler Operator: IAM Central Utility Staff

Boiler Emission Unit ID^b: Boiler #1 Williston Site Bldg. 801

Tune-Up Conducted By: BMR Thermal Inc Lee Smith Technician

Please Print

SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken			
<input checked="" type="checkbox"/>	Inspect the burner ^c	Clean or replace any components of the burner, as necessary	Rebuild A.C. valves to be complete by 9/2012		
<input checked="" type="checkbox"/>	Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	Drill & pin linkages (complete) flame view port opening		
<input checked="" type="checkbox"/>	Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	made adjustments		
<input checked="" type="checkbox"/>	Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	made adjustments		
<input checked="" type="checkbox"/>	Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	Parameter	Before	After	
		Basis (wet or <u>dry</u>)			
		CO (ppmv)	N/A	13.7	} GAS
		O ₂ (% by volume)	N/A	5.4	
		CO (ppmv)	N/A	14.4	} OIL
O ₂ (% by vol)	N/A	5.5			

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.
^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

SECTION IV: RECORD OF MANUFACTURER SPECIFICATIONS (§63.11225(c)(2))

If your boiler has manufacturer specifications for adjusting the flame patterns or optimizing total emissions of carbon monoxide, maintain a copy of these specifications in your records.

SECTION V: RECORD OF FUEL TYPE (§63.11223(b)(6)(iii))

Fuel Type ^e	Amount of fuel used or delivered for the 12 months ^f preceding the tune-up ^g							Units of measure ^h
	Delivery Date Or Period of Consumption	Example: 5/20/2011	Example: 5/20/2011 - 8/31/2011					
Natural Gas		See Attached						
Fuel Oil #2		See Attached						

[Add rows to the table for additional fuels, as necessary.]

STOP If you have more than one boiler that must conduct a tune-up, please repeat Sections II, III, IV, and V for each boiler. Otherwise, proceed to Section VI below. Keep Sections II through V in your records for 5 years. You do not submit this information unless requested by your delegated authority.

^e Report all fuels used in each of the units subject to the standard (e.g., bituminous coal, #6 fuel oil, #2 fuel oil, natural gas, bark, lumber, etc.). See the definition of fuel type in §63.11237.

^f For the first tune-up, this fuel consumption record begins on May 20, 2011, the effective date of the rule. Thus, the first tune-up record will not reflect an entire 12 months of consumption data.

^g EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery- instead of fuel consumption- will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies. e.g., Gallons, tons, standard cubic feet (scf), etc.

	Williston Site Bldg. 801 Boiler 1 and 2 Gas flow (ccf)
May-11	10,660
Jun-11	-
Jul-11	-
Aug-11	-
Sep-11	4,160
Oct-11	15,750
Nov-11	20,840
Dec-11	27,740
Jan-12	32,970
Feb-12	29,320

Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Williston Site Bldg. 801 Boilers 1 and 2 combined

	Williston Site use of Fuel oil #2 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	82				
Nov-11	0				
Dec-11	0				
Jan-12	264				
Feb-12	171				
Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Williston Site Bldg. 801 Boilers 1 and 2 combined					

SECTION II: RECORD OF GENERAL BOILER INFORMATION

Date: 3/20/2012

Reporting Period: 3/1/2011 → 2/28/2012

Boiler Operator: IBM Central Utility plant Staff

Boiler Emission Unit ID^b: Boiler #2 Williston Site Bldg. 801

Tune-Up Conducted By: BMR Thermal Inc. Lee Smith technician
Please Print



SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken																			
<input checked="" type="checkbox"/>	Inspect the burner ^c	Clean or replace any components of the burner, as necessary	Rebuild A.C. valves to be complete by 9/2012																		
<input checked="" type="checkbox"/>	Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	Drill & pin linkages (complete) flame view port opening																		
<input checked="" type="checkbox"/>	Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	made adjustments																		
<input checked="" type="checkbox"/>	Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	made adjustments																		
<input checked="" type="checkbox"/>	Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td>Basis (wet or dry)</td> <td></td> <td></td> </tr> <tr> <td>CO (ppmv)</td> <td>N/A</td> <td>9.7</td> </tr> <tr> <td>O₂ (% by volume)</td> <td>N/A</td> <td>5.5</td> </tr> <tr> <td>CO (ppmv)</td> <td>N/A</td> <td>8.1</td> </tr> <tr> <td>O₂ (% by volume)</td> <td>N/A</td> <td>6.9</td> </tr> </tbody> </table>	Parameter	Before	After	Basis (wet or dry)			CO (ppmv)	N/A	9.7	O ₂ (% by volume)	N/A	5.5	CO (ppmv)	N/A	8.1	O ₂ (% by volume)	N/A	6.9	} gas } oil
Parameter	Before	After																			
Basis (wet or dry)																					
CO (ppmv)	N/A	9.7																			
O ₂ (% by volume)	N/A	5.5																			
CO (ppmv)	N/A	8.1																			
O ₂ (% by volume)	N/A	6.9																			

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.
^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

SECTION IV: RECORD OF MANUFACTURER SPECIFICATIONS (§63.11225(c)(2))

If your boiler has manufacturer specifications for adjusting the flame patterns or optimizing total emissions of carbon monoxide, maintain a copy of these specifications in your records.

SECTION V: RECORD OF FUEL TYPE (§63.11223(b)(6)(iii))

Fuel Type ^e	Amount of fuel used or delivered for the 12 months ^f preceding the tune-up ^g							Units of measure ^h
	Delivery Date Or Period of Consumption	Example: 5/20/2011	Example: 5/20/2011 - 8/31/2011					
Natural Gas		See Attached						
Fuel Oil #2		See Attached						

[Add rows to the table for additional fuels, as necessary.]

If you have more than one boiler that must conduct a tune-up, please repeat Sections II, III, IV, and V for each boiler. Otherwise, proceed to Section VI below. Keep Sections II through V in your records for 5 years. You do not submit this information unless requested by your delegated authority.



^e Report all fuels used in each of the units subject to the standard (e.g., bituminous coal, #6 fuel oil, #2 fuel oil, natural gas, bark, lumber, etc.). See the definition of fuel type in §63.11237.
^f For the first tune-up, this fuel consumption record begins on May 20, 2011, the effective date of the rule. Thus, the first tune-up record will not reflect an entire 12 months of consumption data.
^g EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery instead of fuel consumption will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies.
^h e.g., Gallons, tons, standard cubic feet (scf), etc.

	Williston Site Bldg. 801 Boiler 1 and 2 Gas flow (ccf)
May-11	10,660
Jun-11	-
Jul-11	-
Aug-11	-
Sep-11	4,160
Oct-11	15,750
Nov-11	20,840
Dec-11	27,740
Jan-12	32,970
Feb-12	29,320

Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Williston Site Bldg, 801 Boilers 1 and 2 combined

	Williston Site use of Fuel oil #2 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	82				
Nov-11	0				
Dec-11	0				
Jan-12	264				
Feb-12	171				

Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Williston Site Bldg. 801 Boilers 1 and 2 combined

SECTION II: RECORD OF GENERAL BOILER INFORMATION

Date: 3/20/2012

Reporting Period: 3/1/2011 → 2/28/2012

Boiler Operator: IBM Central Utility Plant staff

Boiler Emission Unit ID^b: Generator #1 main site Bldg 963

Tune-Up Conducted By: BMR Thermal Inc. Lee Smith Technician

FM Global Please Print Florentino Encarnacion Technician



SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken			
<input checked="" type="checkbox"/>	Inspect the burner ^c	Clean or replace any components of the burner, as necessary	no adverse conditions Refraction OK		
<input checked="" type="checkbox"/>	Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	no issues		
<input checked="" type="checkbox"/>	Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	minor tweak of air curve on oil		
<input checked="" type="checkbox"/>	Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	minor tweak of air curve on oil		
<input checked="" type="checkbox"/>	Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	Parameter	Before	After	} gas } oil
		Basis (wet or dry)			
		CO (ppmv)	N/A	8.7	
		O ₂ (% by volume)	N/A	5.2	
		CO (ppmv)	N/A	3.7	
		O ₂ (% by volume)	N/A	5.0	

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.
^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

SECTION IV: RECORD OF MANUFACTURER SPECIFICATIONS (§63.11225(c)(2))

If your boiler has manufacturer specifications for adjusting the flame patterns or optimizing total emissions of carbon monoxide, maintain a copy of these specifications in your records.

SECTION V: RECORD OF FUEL TYPE (§63.11223(b)(6)(iii))

Fuel Type ^e	Amount of fuel used or delivered for the 12 months ^f preceding the tune-up ^g							Units of measure ^h
	Delivery Date Or Period of Consumption	Example: 5/20/2011	Example: 5/20/2011 - 8/31/2011					
Natural gas	See Attached							
Fuel Oil #6	See Attached							

[Add rows to the table for additional fuels, as necessary.]

STOP If you have more than one boiler that must conduct a tune-up, please repeat Sections II, III, IV, and V for each boiler. Otherwise, proceed to Section VI below. Keep Sections II through V in your records for 5 years. You do not submit this information unless requested by your delegated authority.

^e Report all fuels used in each of the units subject to the standard (e.g., bituminous coal, #6 fuel oil, #2 fuel oil, natural gas, bark, lumber, etc.). See the definition of fuel type in §63.11237.

^f For the first tune-up, this fuel consumption record begins on May 20, 2011, the effective date of the rule. Thus, the first tune-up record will not reflect an entire 12 months of consumption data.

^g EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery instead of fuel consumption will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies.

^h e.g., Gallons, tons, standard cubic feet (scf), etc.

	HTHW Main Site Bldg. 963 Generator #1 Gas Flow (ccf)
May-11	-
Jun-11	-
Jul-11	173
Aug-11	-
Sep-11	-
Oct-11	11,158
Nov-11	-
Dec-11	-
Jan-12	-
Feb-12	4,297

	Main Site use of Fuel Oil #6 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	6,315				
Nov-11	0				
Dec-11	1,367				
Jan-12	4,934				
Feb-12	2,568				
<p>Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Main Site Bldg 963 HTHW Generators 1,2,3,4,5,and 7 combined</p>					

SECTION II: RECORD OF GENERAL BOILER INFORMATION

Date: 3/20/2012
 Reporting Period: 3/1/2011 → 2/28/2012
 Boiler Operator: IAM Central Utility Plant Staff
 Boiler Emission Unit ID: boiler #2 main site Aiky 963
 Tune-Up Conducted By: BMR Thermal Inc. Lec Smithy technician
FM Global Please Print Florentino Escamacion Technician



SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken																			
<input checked="" type="checkbox"/>	Inspect the burner ^c	Clean or replace any components of the burner, as necessary	no abuse conditions																		
<input checked="" type="checkbox"/>	Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	no issues																		
<input checked="" type="checkbox"/>	Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	adjusted air fuel ratios on gas																		
<input checked="" type="checkbox"/>	Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	adjusted air fuel ratios on gas																		
<input checked="" type="checkbox"/>	Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td>Basis (wet or dry)</td> <td></td> <td></td> </tr> <tr> <td>CO (ppmv)</td> <td>89</td> <td>6</td> </tr> <tr> <td>O₂ (% by volume)</td> <td>4.1</td> <td>4.2</td> </tr> <tr> <td>CO (ppmv)</td> <td>N/A</td> <td>8</td> </tr> <tr> <td>O₂ (% by volume)</td> <td>N/A</td> <td>6.3</td> </tr> </tbody> </table>	Parameter	Before	After	Basis (wet or dry)			CO (ppmv)	89	6	O ₂ (% by volume)	4.1	4.2	CO (ppmv)	N/A	8	O ₂ (% by volume)	N/A	6.3	} gas } oil
Parameter		Before	After																		
Basis (wet or dry)																					
CO (ppmv)		89	6																		
O ₂ (% by volume)		4.1	4.2																		
CO (ppmv)	N/A	8																			
O ₂ (% by volume)	N/A	6.3																			

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.
^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

SECTION IV: RECORD OF MANUFACTURER SPECIFICATIONS (§63.11225(c)(2))

If your boiler has manufacturer specifications for adjusting the flame patterns or optimizing total emissions of carbon monoxide, maintain a copy of these specifications in your records.

SECTION V: RECORD OF FUEL TYPE (§63.11223(b)(6)(iii))

Fuel Type ^e	Amount of fuel used or delivered for the 12 months ^f preceding the tune-up ^g						Units of measure ^h
	Delivery Date Or Period of Consumption	Example: 5/20/2011	Example: 5/20/2011 -- 8/31/2011				
Natural Gas		See Attached					
Fuel oil #6		See Attached					

[Add rows to the table for additional fuels, as necessary.]

STOP If you have more than one boiler that must conduct a tune-up, please repeat Sections II, III, IV, and V for each boiler. Otherwise, proceed to Section VI below. Keep Sections II through V in your records for 5 years. You do not submit this information unless requested by your delegated authority.

^e Report all fuels used in each of the units subject to the standard (e.g., bituminous coal, #6 fuel oil, #2 fuel oil, natural gas, bark, lumber, etc.). See the definition of fuel type in §63.11237.
^f For the first tune-up, this fuel consumption record begins on May 20, 2011, the effective date of the rule. Thus, the first tune-up record will not reflect an entire 12 months of consumption data.
^g EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery- instead of fuel consumption- will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies.
^h e.g., Gallons, tons, standard cubic feet (scf), etc.

	HTHW Main Site Bldg. 963 Generator #2 Gas Flow (ccf)
May-11	89,674
Jun-11	45,590
Jul-11	140,055
Aug-11	80,771
Sep-11	216,418
Oct-11	137,973
Nov-11	211,919
Dec-11	269,889
Jan-12	284,698
Feb-12	152,784

	Main Site use of Fuel Oil #6 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	6,315				
Nov-11	0				
Dec-11	1,367				
Jan-12	4,934				
Feb-12	2,568				
<p>Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Main Site Bldg 963 HTHW Generators 1,2,3,4,5,and 7 combined</p>					

SECTION II: RECORD OF GENERAL BOILER INFORMATION

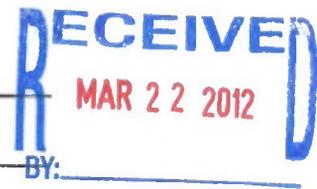
Date: 3/20/2012

Reporting Period: 3/1/2011 → 2/28/2012

Boiler Operator: IRA Central Utility Plant Staff

Boiler Emission Unit ID^b: Generator #3 main site Bldg. 963

Tune-Up Conducted By: BAR Thermal Inc Lee Smith technician
FR Global Please Print Florentino Encarnacion technician



SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken			
<input checked="" type="checkbox"/>	Inspect the burner ^c	Clean or replace any components of the burner, as necessary	no adverse conditions Refractory OK		
<input checked="" type="checkbox"/>	Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	no issues		
<input checked="" type="checkbox"/>	Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	no issues		
<input checked="" type="checkbox"/>	Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	no issues		
<input checked="" type="checkbox"/>	Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	Parameter	Before	After	} gas
		Basis (wet or dry)			
		CO (ppmv)	N/A	2	
		O ₂ (% by volume)	N/A	5.0	
		CO (ppmv)	N/A	2	
O ₂ (% by volume)	N/A	4.7			

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.
^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

SECTION IV: RECORD OF MANUFACTURER SPECIFICATIONS (§63.11225(c)(2))

If your boiler has manufacturer specifications for adjusting the flame patterns or optimizing total emissions of carbon monoxide, maintain a copy of these specifications in your records.

SECTION V: RECORD OF FUEL TYPE (§63.11223(b)(6)(iii))

Fuel Type ^e	Amount of fuel used or delivered for the 12 months ^f preceding the tune-up ^g							Units of measure ^h
	Delivery Date Or Period of Consumption	Example: 5/20/2011	Example: 5/20/2011 - 8/31/2011					
Natural Gas		See Attached						
Fuel oil #6		See Attached						

[Add rows to the table for additional fuels, as necessary.]

STOP If you have more than one boiler that must conduct a tune-up, please repeat Sections II, III, IV, and V for each boiler. Otherwise, proceed to Section VI below. Keep Sections II through V in your records for 5 years. You do not submit this information unless requested by your delegated authority.

^e Report all fuels used in each of the units subject to the standard (e.g., bituminous coal, #6 fuel oil, #2 fuel oil, natural gas, bark, lumber, etc.). See the definition of fuel type in §63.11237.

^f For the first tune-up, this fuel consumption record begins on May 20, 2011, the effective date of the rule. Thus, the first tune-up record will not reflect an entire 12 months of consumption data.

^g EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery instead of fuel consumption will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies.

^h e.g., Gallons, tons, standard cubic feet (scf), etc.

	HTHW Main Site Bldg. 963 Generator #3 Gas Flow (ccf)
May-11	101
Jun-11	-
Jul-11	9,445
Aug-11	-
Sep-11	-
Oct-11	762
Nov-11	-
Dec-11	992
Jan-12	1,187
Feb-12	12,960

	Main Site use of Fuel Oil #6 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	6,315				
Nov-11	0				
Dec-11	1,367				
Jan-12	4,934				
Feb-12	2,568				
<p>Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Main Site Bldg 963 HTHW Generators 1,2,3,4,5,and 7 combined</p>					

SECTION II: RECORD OF GENERAL BOILER INFORMATION



Date: 3/20/2012

Reporting Period: 3/1/2011 → 2/28/2012

Boiler Operator: IRM Central Utility Plant Staff

Boiler Emission Unit ID^b: Generator #5 Main Site Bldg. 963

Tune-Up Conducted By: BMR Thermal Inc. Lee Smith technician
FM Global Please Print Florentino Encarnacion Technician

SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken																			
<input checked="" type="checkbox"/>	Inspect the burner ^c	Clean or replace any components of the burner, as necessary	no adverse conditions																		
<input checked="" type="checkbox"/>	Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	no issues																		
<input checked="" type="checkbox"/>	Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	no issues																		
<input checked="" type="checkbox"/>	Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	no issues																		
<input checked="" type="checkbox"/>	Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td>Basis (wet or dry)</td> <td></td> <td></td> </tr> <tr> <td>CO (ppmv)</td> <td>N/A</td> <td>2</td> </tr> <tr> <td>O₂ (% by volume)</td> <td>N/A</td> <td>3.6</td> </tr> <tr> <td>CO (ppmv)</td> <td>N/A</td> <td>0</td> </tr> <tr> <td>O₂ (% by volume)</td> <td>N/A</td> <td>5.0</td> </tr> </tbody> </table>	Parameter	Before	After	Basis (wet or dry)			CO (ppmv)	N/A	2	O ₂ (% by volume)	N/A	3.6	CO (ppmv)	N/A	0	O ₂ (% by volume)	N/A	5.0	} gas } oil
Parameter	Before	After																			
Basis (wet or dry)																					
CO (ppmv)	N/A	2																			
O ₂ (% by volume)	N/A	3.6																			
CO (ppmv)	N/A	0																			
O ₂ (% by volume)	N/A	5.0																			

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.
^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

SECTION IV: RECORD OF MANUFACTURER SPECIFICATIONS (§63.11225(c)(2))

If your boiler has manufacturer specifications for adjusting the flame patterns or optimizing total emissions of carbon monoxide, maintain a copy of these specifications in your records.

SECTION V: RECORD OF FUEL TYPE (§63.11223(b)(6)(iii))

Fuel Type ^e	Amount of fuel used or delivered for the 12 months ^f preceding the tune-up ^g										Units of measure ^h	
	Delivery Date Or Period of Consumption	Example: 5/20/2011	Example: 5/20/2011 - 8/31/2011									
Natural Gas		See Attached										
Fuel oil #6		See Attached										

[Add rows to the table for additional fuels, as necessary.]

STOP If you have more than one boiler that must conduct a tune-up, please repeat Sections II, III, IV, and V for each boiler. Otherwise, proceed to Section VI below. Keep Sections II through V in your records for 5 years. You do not submit this information unless requested by your delegated authority.

^e Report all fuels used in each of the units subject to the standard (e.g., bituminous coal, #6 fuel oil, #2 fuel oil, natural gas, bark, lumber, etc.). See the definition of fuel type in §63.11237.
^f For the first tune-up, this fuel consumption record begins on May 20, 2011, the effective date of the rule. Thus, the first tune-up record will not reflect an entire 12 months of consumption data.
^g EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery instead of fuel consumption will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies.
^h e.g., Gallons, tons, standard cubic feet (scf), etc.

	HTHW Main Site Bldg. 963 Generator #5 Gas Flow (ccf)
May-11	-
Jun-11	-
Jul-11	18,572
Aug-11	9,071
Sep-11	-
Oct-11	-
Nov-11	-
Dec-11	222
Jan-12	1,015
Feb-12	13,720

	Main Site use of Fuel Oil #6 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	6,315				
Nov-11	0				
Dec-11	1,367				
Jan-12	4,934				
Feb-12	2,568				
Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Main Site Bldg 963 HTHW Generators 1,2,3,4,5,and 7 combined					



SECTION II: RECORD OF GENERAL BOILER INFORMATION

Date: 3/20/2012

Reporting Period: 3/1/2011 → 2/28/2012

Boiler Operator: IGN Central Utility Plant Staff

Boiler Emission Unit ID^b: Generator #7 main site Bldg. 963

Tune-Up Conducted By: BMR Thermal Inc. Lee Smith technician
FM Global Please Print Florentino Escobar Technician

SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken			
<input checked="" type="checkbox"/>	Inspect the burner ^c	Clean or replace any components of the burner, as necessary	no adverse conditions		
<input checked="" type="checkbox"/>	Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	no issues		
<input checked="" type="checkbox"/>	Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	no issues		
<input checked="" type="checkbox"/>	Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	no issues		
<input checked="" type="checkbox"/>	Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	Parameter	Before	After	} gas } oil
		Basis (wet or dry)			
		CO (ppmv)	N/A	0	
		O ₂ (% by volume)	N/A	4.3	
		CO (ppmv)	N/A	0	
	O ₂ (% by volume)	N/A	4.4		

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.
^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

SECTION IV: RECORD OF MANUFACTURER SPECIFICATIONS (§63.11225(c)(2))

If your boiler has manufacturer specifications for adjusting the flame patterns or optimizing total emissions of carbon monoxide, maintain a copy of these specifications in your records.

SECTION V: RECORD OF FUEL TYPE (§63.11223(b)(6)(iii))

Fuel Type ^e	Amount of fuel used or delivered for the 12 months ^f preceding the tune-up ^g							Units of measure ^h
	Delivery Date Or Period of Consumption	Example: 5/20/2011	Example: 5/20/2011 - 8/31/2011					
Natural Gas		See Attached						
Fuel oil #6		See Attached						

[Add rows to the table for additional fuels, as necessary.]

STOP If you have more than one boiler that must conduct a tune-up, please repeat Sections II, III, IV, and V for each boiler. Otherwise, proceed to Section VI below. Keep Sections II through V in your records for 5 years. You do not submit this information unless requested by your delegated authority.

^e Report all fuels used in each of the units subject to the standard (e.g., bituminous coal, #6 fuel oil, #2 fuel oil, natural gas, bark, lumber, etc.). See the definition of fuel type in §63.11237.

^f For the first tune-up, this fuel consumption record begins on May 20, 2011, the effective date of the rule. Thus, the first tune-up record will not reflect an entire 12 months of consumption data.

^g EPA recognizes that not all facilities have fuel metering capabilities. Records of fuel delivery- instead of fuel consumption- will also meet the rule requirements. Affected sources have discretion on the periods of fuel records maintained on-site. The records may be annual, monthly, or periodic, depending on fuel delivery frequencies. ^h e.g., Gallons, tons, standard cubic feet (scf), etc.

	HTHW Main Site Bldg. 963 Generator #7 Gas Flow (ccf)
May-11	212,889
Jun-11	-
Jul-11	36,782
Aug-11	88,590
Sep-11	-
Oct-11	75,663
Nov-11	162,644
Dec-11	257,979
Jan-12	337,098
Feb-12	349,574

	Main Site use of Fuel Oil #6 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	6,315				
Nov-11	0				
Dec-11	1,367				
Jan-12	4,934				
Feb-12	2,568				

Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Main Site Bldg 963 HTHW Generators 1,2,3,4,5,and 7 combined



SECTION II: RECORD OF GENERAL BOILER INFORMATION

Date: 3/20/2012

Reporting Period: 3/1/2011 → 2/28/2012

Boiler Operator: IBA Central Utility Plant Staff

Boiler Emission Unit ID^b: Generator #4 Main Site Bldg. 963

Tune-Up Conducted By: BMR Thermal Inc. Lee Smith Technician
FM Global Please Print Florencio Guernacion Technician

SECTION III: RECORD OF TUNE-UP PROCEDURES (§63.11225(c)(2) and (§63.11223(b)(6)(i) and (ii))

Check the applicable box when the procedure is completed. If the procedure does not apply to you, indicate 'not applicable' or 'NA' in the comments column.

Requirement	Description	Inspector Comments/ Corrective Actions Taken		
<input checked="" type="checkbox"/> Inspect the burner ^c	Clean or replace any components of the burner, as necessary	No adverse conditions Refractory OK		
<input checked="" type="checkbox"/> Inspect the flame pattern	Adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.	no issues		
<input checked="" type="checkbox"/> Inspect air-to-fuel ratio control system	Ensure system is calibrated and functioning properly, if such a system is installed on the boiler	Tweak of air curve Repair + RECALIB		
<input checked="" type="checkbox"/> Optimize emissions of carbon monoxide (CO)	Optimize emissions consistent with the manufacturer's specifications, if available.	after oil gun repair		
<input checked="" type="checkbox"/> Measure CO and O ₂ levels in exhaust, before and after tune-up ^d	Parameter	Before	After	
	Basis (wet or dry)			
	CO (ppmv)	N/A	1	gas
	O ₂ (% by volume)	N/A	4.9	
	CO (ppmv)	17	9	oil
O ₂ (% by volume)	5.5	5.6		

^b Use the boiler emission unit ID consistent with the ID provided in the Initial Notification Report.

^c You may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.

^d Measurements may be made on either a dry or wet basis, as long as it is the same basis before and after the tune-up adjustments are made. CO concentration measurements must be made in units of parts per million by volume (ppmv). Oxygen (O₂) concentration measurements must be made as percent by volume.

	HTHW Main Site Bldg. 963 Generator #4 Gas Flow (ccf)
May-11	28,940
Jun-11	211,262
Jul-11	38,359
Aug-11	67,118
Sep-11	40,606
Oct-11	188,610
Nov-11	147,738
Dec-11	251,223
Jan-12	311,711
Feb-12	292,560

	Main Site use of Fuel Oil #6 (gallons)				
May-11	0				
Jun-11	0				
Jul-11	0				
Aug-11	0				
Sep-11	0				
Oct-11	6,315				
Nov-11	0				
Dec-11	1,367				
Jan-12	4,934				
Feb-12	2,568				
<p>Note: Usage can not be split out by unit due to fuel metering limitations and is reported as Main Site Bldg 963 HTHW Generators 1,2,3,4,5,and 7 combined</p>					